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Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).**FEE TRANSMITTAL**
For FY 2005☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT** (\$) 500.00**Complete if Known**

| | |
|----------------------|------------------------|
| Application Number | 09/474,121-Conf. #1895 |
| Filing Date | December 29, 1999 |
| First Named Inventor | Sun YANG |
| Examiner Name | T. V. Tran |
| Art Unit | 3652 |
| Attorney Docket No. | 0630-1029P |

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____
☐ Deposit Account Deposit Account Number: 02-2448 Deposit Account Name: Birch, Stewart, Kolasch & Birch, LLP

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FEE CALCULATION**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

| Application Type | FILING FEES | | SEARCH FEES | | EXAMINATION FEES | | Fees Paid (\$) |
|------------------|-------------|-----------------------|-------------|-----------------------|------------------|-----------------------|----------------|
| | Fee (\$) | Small Entity Fee (\$) | Fee (\$) | Small Entity Fee (\$) | Fee (\$) | Small Entity Fee (\$) | |
| Utility | 300 | 150 | 500 | 250 | 200 | 100 | |
| Design | 200 | 100 | 100 | 50 | 130 | 65 | |
| Plant | 200 | 100 | 300 | 150 | 160 | 80 | |
| Reissue | 300 | 150 | 500 | 250 | 600 | 300 | |
| Provisional | 200 | 100 | 0 | 0 | 0 | 0 | |

2. EXCESS CLAIM FEES

| Fee Description | Fee (\$) | Small Entity Fee (\$) |
|--|----------|-----------------------|
| Each claim over 20 (including Reissues) | 50 | 25 |
| Each independent claim over 3 (including Reissues) | 200 | 100 |
| Multiple dependent claims | 360 | 180 |

Total Claims Extra Claims Fee (\$) Fee Paid (\$)
_____ - 20 = _____ x _____ = _____

Multiple Dependent Claims
Fee (\$) Fee Paid (\$)
_____ _____

Indep. Claims Extra Claims Fee (\$) Fee Paid (\$)
_____ - 3 = _____ x _____ = _____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

| Total Sheets | Extra Sheets | Number of each additional 50 or fraction thereof | Fee (\$) | Fee Paid (\$) |
|--------------|--------------|---|----------|---------------|
| _____ | _____ | _____ / 50 _____ (round up to a whole number) x _____ | _____ | _____ |

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): 1402 Filing a brief in support of an appeal 500.00

| | | | | | |
|---------------------|----------------------------|-----------------------------------|--------|-----------|--------------------|
| SUBMITTED BY | | Registration No. (Attorney/Agent) | 39,538 | Telephone | (703) 205-8000 |
| Signature | <i>James T. Eller, Jr.</i> | | | Date | September 23, 2005 |
| Name (Print/Type) | James T. Eller, Jr. | | | | |



MS APPEAL BRIEF - PATENTS
Docket No.: 0630-1029P
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Sun YANG et al.

Application No.: 09/474,121

Confirmation No.: 1895

Filed: December 29, 1999

Art Unit: 3652

For: ELEVATOR SYSTEM WITHOUT MACHINE
ROOM

Examiner: T. V. Tran

APPEAL BRIEF TRANSMITTAL FORM

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Transmitted herewith is an Appeal Brief on behalf of the Appellants in connection with the above-identified application.

☐ The enclosed document is being transmitted via the Certificate of Mailing provisions of 37 C.F.R. § 1.8.

A Notice of Appeal was filed on July 25, 2005.

☐ Applicant claims small entity status in accordance with 37 C.F.R. § 1.27.

The fee has been calculated as shown below:

09/26/2005 SZEWDIE1 00000005 09474121

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Application No.: 09/474,121

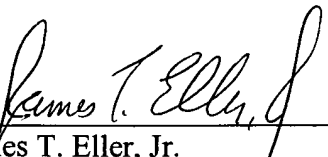
Docket No.: 0630-1029P

- ☐ Extension of time fee pursuant to 37 C.F.R. §§ 1.17 and 1.136(a)
- ☒ Fee for filing an Appeal Brief - \$500.00 (large entity).
- ☒ Check(s) in the amount of \$500.00 is attached.
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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: September 23, 2005

Respectfully submitted,

By 
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Attachment(s)



Docket No.: 0630-1029P
(PATENT)

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: Sun H. YANG et al. Conf. No.: 1895
Appl. No.: 09/474,121 Group: 3652
Filed: December 29, 1999 Examiner: T. Tran
For: ELEVATOR SYSTEM WITHOUT MACHINE ROOM

BRIEF ON APPEAL UNDER 37 C.F.R. § 41.37

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

As required under § 41.37(a), this brief is filed within two months of the Notice of Appeal filed in this case on July 25, 2005, and is in furtherance of said Notice of Appeal.

The fees required under § 41.20(b)(2) are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1206:

- I. Real Party In Interest
- II. Related Appeals and Interferences
- III. Status of Claims

- IV. Status of Amendments
- V. Summary of Claimed Subject Matter
- VI. Grounds of Rejection to be Reviewed on Appeal
- VII. Argument
- VIII. Claims
- IX. Evidence
- X. Related Proceedings
- Appendix A. Claims

I. Real Party in Interest

The real party in interest for this Application is LG Industrial Systems, Co., Ltd., as evidenced by an Assignment recorded on December 29, 1999 at Reel 010491, Frame 0801.

II. Related Appeals and Interferences

To the best of Appellants' knowledge, there are no other prior or pending appeals of this Application, or patent interference proceedings, or judicial proceedings which may be related to, directly affect, or be directly affected by, or have a bearing on the Board's decision of this Appeal.

III. Status of Claims

In the Application on appeal, claims 32-57 are pending. Claims 32, 45 and 54 are independent. Claims 38, 42, 43, 47 and 49-51 have been withdrawn from consideration as being directed to a non-elected invention. Claims 32-37, 39, 40, 41, 44, 46 and 52-56 are rejected and are on appeal. Claims 48 and 57 are objected to as being dependent on a rejected base claim and would be allowed if re-written in independent form.

IV. Status of Amendments

The Amendment under 37 C.F.R. §1.116, filed on May 3, 2005, has been entered (as noted on page 2 of the Office Action mailed on February 25, 2005).

V. Summary of the Claimed Subject Matter

Claims 32 and 54 are the two independent claims.

Claim 32 is directed to an elevator system without a machine room, comprising: a hoistway 2 having a pair of elevator car guide rails 4 and a pair of counterweight guide rails 5, the counterweight guide rails 4 being shorter than the elevator guide rails 4; an elevator car 1 movable up and down along the elevator car guide rails 4; a counterweight 3 movable up and down along the counterweight guide rails 5; roping means 100 for suspending said elevator car 1 and said counterweight 3; and a winding apparatus 10 engaged with said roping means 100 for moving said roping means 100 for thereby moving said elevator car 1; and wherein said winding apparatus 10 is installed on an installation member 6 fixed on upper portions of the counterweight guide rails 5 at a position lower than an upper portion of said elevator car when said elevator car is positioned at a highest floor of said hoistway.

Claim 54 is directed to an elevator system without a machine room, comprising: a hoistway 2 having a pair of elevator car guide rails 4 and a pair of counterweight guide rails 5, the counterweight guide rails 5 being shorter than the elevator guide rails 4; an elevator car 1 movable up and down along the elevator car guide rails 4; a counterweight 3 movable up and down along the counterweight guide rails 5; roping means 100 for suspending said elevator car and said counterweight 3; and a winding apparatus 10 engaged with said roping means 100 for moving said roping means 100 for thereby moving said elevator car 1; and wherein said winding apparatus 10 is installed on an installation member 6 fixed on upper portions of the counterweight guide rails 5 at a position lower than an upper portion of said elevator car 1 when said elevator car 1 is positioned at a highest floor of said hoistway 2, and a movement stroke of

the counterweight 3 is shorter than a movement stroke of the elevator car 1.

The structure corresponding to the language “roping means for suspending said elevator car and said counterweight” is disclosed as roping unit 100 and is set forth, for example, from page 16, line 22 through page 17, line 11; from page 18, line 5 through line 24; from page 19, line 25 through page 20, line 25; from page 21, line 10 through page 22, line 1; and from page 22, line 8 through page 23, line 4. The roping means 100 is labeled as such in Figs. 1-5, 12-16, 18, 20-22 and 24-27, and component parts of the roping means are shown in all figures. The component parts of the roping system that are not labeled with number 100 are also shown in the remaining figures, i.e., Figs. 6-11, 17, 19, 23 and 28. Reference characters representing the roping system 100 in the drawings include reference numbers 101, 110, 111, 112, 120, 121, 122, 123, 123', 124, 125, 126 and 127.

VI. Grounds of Rejection to be Reviewed on Appeal

Claims 32-37, 39-41, 44, 46 and 52-56 stand rejected under 35 U.S.C. §103(a) as being unpatentable over JP 11-060117A in view of JP 4-50297 Y2.

According to the final Office Action, JP '117 discloses an elevator system comprising a pair of elevator car guide rails 10 and a pair of counterweight guide rails 11 being shorter than the car guide rails; an elevator car movable up and down along the car guide rails; a counterweight movable up and down along the counterweight guide rails; roping means 3 for suspending the car and the counterweight; and a winding apparatus 9, installed on an installation member 13 fixed at a position lower than an upper portion of the car when the car is positioned at the highest floor of the hoistway, wherein the roping means drives the car having relatively longer movement stroke than the counterweight stroke by a 2:3 roping method; and wherein one end of the roping means is fixed at a fixing portion formed at an upper portion of the hoistway that is a fixing member (17) fixed at an inner wall surface of the hoistway.

The Office Action admits that the installation member 13 of JP '117 is fixed to a sidewall of the hoistway instead of being fixed on the upper portions of the counterweight guide rails, as recited in the claimed invention.

To remedy the admitted deficiency in JP '117, the Office Action turns to JP '297.

According to the final Office Action, "JP '297 teaches that having the installation member fixed on the counterweight guide rails would allow the load in the vertical direction applied to the winding apparatus is absorbed by the guide rail thus cost for the building materials can be reduce."

The final Office Action concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have fixed the installation member of JP '117 on the

upper portion of the counterweight guide rails in order to reduce the cost for the building material as taught by JP'297.

VII. Argument

In rejecting claims under 35 U.S.C. §103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention.

Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. F-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 The Examiner may not pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve Inc., 796 F.2d 443, 448, 230 USPQ 416, 419 (Fed. Cir. 1986), cert. denied, 484 U.S. 823 (1987) and In re Kamm, 452 F.2d 1052, 1057, 172 USPQ 298, 301-2 (CCPA 1972), and obviousness cannot be established by locating references which describe various aspects of Appellants' invention without also providing evidence of the motivating force which would impel one skilled in the art to do what Appellants have done. Ex parte Levengood, 28 USPQ2d 1300, 1302 (Bd.

App. & Int. 1993). These showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. These showings must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999). Note, In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Moreover, a factual inquiry whether to modify a reference must be based on objective evidence of record, not merely conclusory statements of the Examiner. See, In re Lee, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

The Office Action admits that JP 11-060117A, the primary reference in the rejection, does not disclose the claimed feature that the installation member is fixed on the upper portion of the counterweight guide rails.

In an attempt to remedy this deficiency, the Office Action turns to JP ‘297, which discloses an elevator with a traction sheave attached to the upper part of one or more counter weight guide rails 10, 11 and 11a.

The Office Action states that in JP '297, "having the installation member fixed on the counterweight guide rails would allow the load in the vertical direction applied to the winding apparatus is absorbed by the guide rail thus cost for the building materials can be reduce." The Office Action then concludes that it would be obvious to "have fixed the installation member of JP '117 on the upper portion of the guide rails in order to reduce the cost for the building material as taught by JP '297."

There are several reasons why this rejection fails to make out a *prima facie* case of obviousness of the claimed invention. Firstly, as is well settled, a rejection based on Section 103 must rest on a factual basis, with the facts being interpreted without hindsight reconstruction of the invention from the prior art. In making this evaluation, the Examiner has the initial duty of supplying the factual basis for the rejection he or she advances. An Examiner may not, because he or she doubts that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis. See, In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968).

Although the Office Action indicates where JP '297 teaches that fixing an installation member on the counterweight guide rails would allow reduced building materials cost, no evidence is presented of the cost of materials involved in either of the two applied references. Moreover, Appellants respectfully submit that the statement about costs in JP '297 is stated with respect to the prior art discussed in the text of JP '297, which includes either (1) a separate mechanical chamber installed above the elevator or (2) a separate mechanical chamber installed adjacent to the lower side of the elevator shaft – see pages 1 and 2 of JP '297.

While eliminating either type of separate mechanical chamber will result in cost savings, JP '117, the base reference being applied in this rejection, does not disclose a separate mechanical chamber. Accordingly, the alleged "cost savings" feature of JP '247 is not relevant to any modification of JP '117. Furthermore, the Office Action has not provided objective factual evidence to support a conclusion that fixing an installation member on counterweight guide rails would result in cost savings compared to the structure of JP '117, wherein hoist 9 and sheave 8 do not require a separate mechanical chamber.

Appellants respectfully submit that there would be no obvious cost savings because neither JP '117 nor JP '247 involves use of a separate mechanical chamber. To suggest that there would be significant enough cost savings to motivate a skilled worker to redesign JP '117 is speculation not supported by objective factual evidence commensurate with such a speculative assertion.

Moreover, the alleged motivation is nothing more than a broad, general, speculative statement about costs of materials which does not constitute specific objective evidence which would properly motivate, i.e., give one of ordinary skill in the art the desire to modify JP '117, which apparently has no need to be modified to achieve its stated goal of eliminating a machine room, to achieve the claimed invention. See, in this regard, Dembiczak, cited above.

Secondly, there appears to be a disincentive to modify JP '117 in view of JP '297. The counterweight guide rails 11 of JP '117 are separate and apart from the elevator guide rails 10 and do not extend above the elevator, so that if JP '117 were to be modified as suggested in the Office Action, i.e., to be placed on the upper portion of JP '117's counterweight guide rails 11, the elevator would not work properly. Reference is made in this regard to Fig. 4, which shows two separate platforms 13 and 13a for two separate hoists, the platform 13a being located well below the

elevator. If JP '117 is modified as suggested, Appellants do not understand how the elevator could rise to the upper floor.

The final Office Action has not addressed this issue. The Office Action fails to demonstrate that making the proposed modification of JP '117 would result in a properly working elevator, especially in view of the aforementioned differences between the two applied references. In this regard, Appellants note that, as pointed out in, *In re Spinnoble*, 405 F.2d 578, 587, 160 USPQ 237, 244 (CCPA 1969), references teach away from being combined if they would produce a "seemingly inoperative device." Appellants respectfully submit that, under the circumstances, JP '297 teaches away from being combined with JP '117, as suggested.

Additionally, the Office Action also fails to point out and discuss any other differences between these two references as required by Graham v. John Deere, cited above. Appellants note that there are other significant differences between these two applied references than the aforementioned counterweight guide rail differences.

In this regard, and as noted in the final Office Action, JP '117 discloses a 2-to-3 roping ratio. The Office Action is silent, however, about the different roping ratio of JP '297, which appears to be 2-to-4. The Office Action does not explain what roping ratio the resultant reference combination would have and whether leaving it the same in the resultant reference combination would work at all, or efficiently, or whether having to change the roping combination of JP '117 from 2-to-3 to 2-to-4 (as disclosed in JP '247) would offer enough of a disincentive to even making the proposed modification of JP '117.

This is a real-world fact that has to be taken into consideration by one of ordinary skill in the art in deciding whether to modify one elevator system with one type of roping ratio in view

of an elevator system with a different type or roping ratio, and the burden is on the Office to demonstrate what effect this difference has on the issue of proper motivation to modify JP '117 in view of JP '297 to result in the claimed invention. Appellants respectfully submit that the Office has not met its burden in this regard by stating that the Examiner is "merely rely[ing] on the teaching of having the installing member fixed on the upper portion of the counterweight guide rails, not the roping of JP '297."

In this regard, Appellants respectfully submit that an Examiner may not pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve Inc., 796 F.2d 443, 448, 230 USPQ 416, 419 (Fed. Cir. 1986), cert. denied, 484 U.S. 823 (1987) and In re Kamm, 452 F.2d 1052, 1057, 172 USPQ 298, 301-2 (CCPA 1972), and obviousness cannot be established by locating references which describe various aspects of Appellants' invention without also providing evidence of the motivating force which would impel one skilled in the art to do what Appellants have done. Ex parte Levengood, 28 USPQ2d 1300, 1302 (Bd. App. & Int. 1993).

Here the Office Action improperly ignores significant differences between JP '117 and JP '297 in making this rejection, including one which teaches away from making the proposed modification of JP '117 and, thereby does not make out a *prima facie* case of obviousness of the claimed invention under 35 U.S.C. §103(a).

A fair, balanced appraisal of the rejection reveals that it (1) is improperly based on a cost savings theory that has not been demonstrated by the Office Action to apply to the main applied

reference, (2) fails to address the significant differences between the references which Appellants point out would teach away from making the proposed modification of JP '117 in view of JP '247; (3) improperly picks and chooses parts of each reference to apply in the rejection while ignoring other disclosed parts of the applied references; and (4) would appear to result in an elevator that would not work properly.

Accordingly, Appellants respectfully submit that this rejection of claims 32-37, 39-41, 44, 46 and 52-56 is improper and should be reversed.

VIII. CLAIMS

A copy of the claims involved in the present appeal is attached hereto as Appendix A. As indicated above, the claims in Appendix A do include the amendments filed by Appellants on May 25, 2005.

IX. EVIDENCE

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the Examiner is being submitted.

X. RELATED PROCEEDINGS

No related proceedings are referenced in Section II, above. Hence, no Related Proceedings Appendix is included.

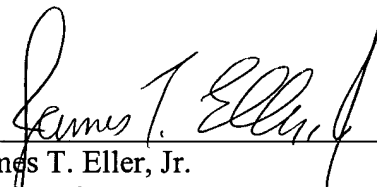
CONCLUSION

Appellants respectfully submit that claims 32-57 are patentable over the applied art and that all of the rejections and objections of record should be reversed.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

Dated: September 23, 2005

Respectfully submitted,

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APPENDIX A: CLAIMS

1-31. (Canceled)

32. (Previously Presented) An elevator system without a machine room, comprising:

a hoistway having a pair of elevator car guide rails and a pair of counterweight guide rails, the counterweight guide rails being shorter than the elevator guide rails;

an elevator car movable up and down along the elevator car guide rails;

a counterweight movable up and down along the counterweight guide rails;

roping means for suspending said elevator car and said counterweight; and

a winding apparatus engaged with said roping means for moving said roping means for thereby moving said elevator car;

wherein said winding apparatus is installed on an installation member fixed on upper portions of the counterweight guide rails at a position lower than an upper portion of said elevator car when said elevator car is positioned at a highest floor of said hoistway.

33. (Previously Presented) The elevator system of claim 32, wherein the upper portions of the counterweight guide rails are lower than a lower portion of the elevator car when the elevator car is positioned at the highest floor of the hoistway.

34. (Previously Presented) The elevator system of claim 32, wherein pulley means engaging said roping means are installed in an upper marginal space of the hoistway formed between the elevator car when the elevator car is positioned at the highest floor of the hoistway

and an upper portion of the hoistway.

35. (Previously Presented) The elevator system of claim 32, wherein the upper portions of the counterweight guide rails are positioned between an upper portion and a lower portion of the elevator car when the elevator car is positioned at the highest floor of the hoistway.

36. (Previously Presented) The elevator system of claim 32, wherein said roping means drives the elevator car having a relatively longer movement stroke, and the counterweight having a smaller movement stroke.

37. (Previously Presented) The elevator system of claim 32, wherein one end of said roping means is fixed at a fixing portion formed at an upper portion of the hoistway, and a pair of pulleys are fixed at lower intermediate portions of the elevator car.

38. (Withdrawn) The elevator system of claim 32, wherein one end of said roping means is fixed at a lower portion of a side of the elevator car, and the other end of said roping means is fixed at the installation member.

39. (Previously Presented) The elevator system of claim 32, wherein one end of said roping means is fixed at a fixing portion formed at an upper portion of the hoistway, and the other end of said roping means is fixed at an upper portion of the counterweight.

40. (Previously Presented) The elevator system of claim 39, wherein said fixing portion is an upper portion of one of the elevator car guide rails.

41. (Previously Presented) The elevator system of claim 39, wherein said fixing portion is a fixing member fixed at an inner wall surface of the hoistway.

42. (Withdrawn) The elevator system of claim 39, wherein said fixing portion is a fixing member fixed between upper portions of the elevator car guide rails and an inner wall surface of the hoistway.

43. (Withdrawn) The elevator system of claim 32, wherein one end of said roping means is a fixing portion formed at an upper portion of the hoistway, and the other end of said roping means is the installation member.

44. (Previously Presented) The elevator system of claim 32, wherein said winding apparatus is a thin disc-type winding apparatus.

45. (Previously Presented) The elevator system of claim 32, wherein:
one end of said roping means is fixed at a fixing portion formed at a lower portion of the elevator car;

said roping means is upwardly moved from the fixing portion and is wound onto an upper outer surface of a first pulley fixed at an upper portion of one of the elevator car guide rails;

a second pulley is engaged at a driving sheave of the winding apparatus, and said roping means is wound from the first pulley onto the driving sheave and the second pulley in an S-shape;

a third pulley is fixed at an upper portion of the counterweight, and then said roping means is wound from the second pulley onto a lower outer surface of the third pulley;

said roping means is upwardly moved from the third pulley, and the other end of said roping means is fixed at the installation member for thereby implementing a 1:2 roping method.

46. (Previously Presented)) The elevator system of claim 32, wherein said roping means is roped by a 2:3 roping method, and an under slung roping method.

47. (Withdrawn) The elevator system of claim 46, wherein:

one end of said roping means is fixed at a fixing portion formed at an upper portion of the hoistway;

a pair of first pulleys are fixed at lower intermediate portions of the elevator car, and said roping means is wound from the fixing portion onto the first pulleys by the under slung roping method;

a second pulley is fixed at an upper portion of one of elevator car guide rails, and then said roping means is upwardly moved from the first pulleys and is wound onto an upper outer surface of the second pulley and then;

said roping means is downwardly moved from the second pulley and is wound onto an outer surface of a third pulley fixed at an upper intermediate portion of the counterweight;

said roping means is upwardly moved from the third pulley and is wound onto an upper outer surface of a driving sheave of the winding apparatus, and said roping means is then downwardly moved from the driving sheave;

the other end of said roping means is fixed at an upper portion of the counterweight.

48. (Previously Presented) The elevator system of claim 46, wherein:

one end of said roping means is fixed at a fixing portion formed at an upper portion of the hoistway;

a pair of first pulleys are fixed at lower intermediate portions of the elevator car, and said roping means is wound from the fixing portion onto a lower surface of the first pulleys by an under slung roping method;

a second pulley is fixed at an upper portion of one of the elevator car guide rails, and said roping means is upwardly moved from the first pulleys the and is wound onto an upper outer surface of the second pulley;

a third pulley is fixed at an upper portion of a driving sheave of the winding apparatus in a slanting direction, and said roping means downwardly moved from the second pulley is wound in an S-shape with a slight gradient with respect to the driving sheave and the third pulley;

said roping means downwardly moved from the third pulley is wound onto a lower outer surface of a fourth pulley fixed at an upper portion of the counterweight;

said roping means upwardly moved from the fourth pulley is wound onto an upper outer surface of a fifth pulley fixed at a lower portion of the driving sheave of the winding apparatus, and

the other end of said roping means downwardly moved from the fifth pulley is fixed at the upper portion of the counterweight.

49. (Withdrawn) The elevator system of claim 32, wherein said roping means is roped by a 2:4 roping method, and an under slung roping method.

50. (Withdrawn) The elevator system of claim 49, wherein:
one end of said roping means is fixed at a fixing portion formed at an upper portion of the hoistway;

a pair of first pulleys are fixed at lower intermediate portions of the elevator car, and said roping means is wound from the fixing portion onto a lower outer surface of the first pulleys by an under slung roping method;

a second pulley is fixed at an upper portion of one of the elevator car guide rails, and said roping means is upwardly moved from the first pulleys and is wound onto an upper outer surface of the second pulley;

said roping means downwardly moved from the second pulley is wound onto a lower outer surface of a third pulley fixed at an upper intermediate portion of the counterweight, and said roping means upwardly moved from the third pulley is wound onto an upper outer surface of a driving sheave of the winding apparatus;

said roping means downwardly moved from the driving sheave is wound onto a lower outer surface of a fourth pulley fixed at an upper portion of the third pulley fixed to the counterweight; and then

the other end of said roping means upwardly moved from the fourth pulley is fixed at the installation member.

51. (Withdrawn) The elevator system of claim 49, wherein:

one end of said roping means is fixed at a fixing portion formed at an upper portion of the hoistway;

a pair of first pulleys are fixed at lower intermediate portions of the elevator car, and said roping means is wound from the fixing portion onto the first pulleys by an under slung roping method;

a second pulley is fixed at an upper portion of one of the elevator car guide rails, and said roping means is upwardly moved from the first pulleys and is wound onto an upper outer surface of the second pulley;

a third pulley is engaged at an upper portion of a driving sheave of the winding apparatus, and said roping means is wound from the second pulley onto the driving sheave and the third pulley in an S-shape;

a pair of fourth pulleys are fixed at an upper portion of the counterweight, and said roping means moved downwardly from the third pulley is wound onto a lower outer surface of one of the fourth pulleys;

said roping means upwardly moved from one of the fourth pulleys is wound onto an upper outer surface of a fifth pulley fixed at a lower intermediate portion of the installation member;

said roping means downwardly moved from the fifth pulley is wound onto a lower outer

surface of the other one of the fourth pulleys; and then

the other end of said roping means upwardly moved from the other one of the fourth pulleys is fixed at a lower portion of the installation member.

52. (Previously Presented) The elevator system of claim 32, wherein the winding apparatus is positioned between a lower portion of said elevator car when said elevator car is positioned at the highest floor of the hoistway, and an upper surface of the counterweight when the counterweight is positioned at the lowest portion of the hoistway.

53. (Previously Presented) The elevator system of claim 32, wherein the winding apparatus is positioned in an installation region of a front portion or a rear portion in an interior of the hoistway formed as a traveling marginal space, and the counterweight is positioned below the winding apparatus.

54. (Previously Presented) An elevator system without a machine room, comprising:
a hoistway having a pair of elevator car guide rails and a pair of counterweight guide rails, the counterweight guide rails being shorter than the elevator guide rails;
an elevator car movable up and down along the elevator car guide rails;
a counterweight movable up and down along the counterweight guide rails;
roping means for suspending said elevator car and said counterweight; and
a winding apparatus engaged with said roping means for moving said roping means for thereby moving said elevator car;

wherein said winding apparatus is installed on an installation member fixed on upper portions of the counterweight guide rails at a position lower than an upper portion of said elevator car when said elevator car is positioned at a highest floor of said hoistway, and a movement stroke of the counterweight is shorter than a movement stroke of the elevator car.

55. (Previously Presented) The elevator system of claim 54, wherein said roping means drives the elevator car having a relatively longer movement stroke, and the counterweight having a smaller movement stroke at the same cycle, and is roped by a roping method.

56. (Previously Presented) The elevator system of claim 54, wherein said roping means is roped by a 2:3 roping method.

57. (Previously Presented) The elevator system of claim 56, wherein:
one end of said roping means is fixed at a fixing portion formed at an upper portion of the hoistway;

a pair of first pulleys are fixed at lower intermediate portions of the elevator car, and said roping means is wound from the fixing portion onto a lower surface of the first pulleys by an under slung roping method;

a second pulley is fixed at an upper portion of one of the elevator car guide rails, and said roping means is upwardly moved from the first pulleys the and is wound onto an upper outer surface of the second pulley;

a third pulley is fixed at an upper portion of a driving sheave of the winding

apparatus in a slanting direction, and said roping means downwardly moved from the second pulley is wound in an S-shape with a slight gradient with respect to the driving sheave and the third pulley;

said roping means downwardly moved from the third pulley is wound onto a lower outer surface of a fourth pulley fixed at an upper portion of the counterweight;

said roping means upwardly moved from the fourth pulley is wound onto an upper outer surface of a fifth pulley fixed at a lower portion of the driving sheave of the winding apparatus, and

the other end of said roping means downwardly moved from the fifth pulley is fixed at the upper portion of the counterweight.